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REMARKS

Claims 1-5, 7-15, 18, 19 and 21-25 remain pending in this application. Claims 6 and 20 have been cancelled. The specification has been amended solely to obviate the objection based on alleged introduction of new matter (with which Applicant does not acquiesce). Reconsideration is requested.

Obviousness Rejections

The obviousness rejections of claims 1-5, 7-15, 18, 19 and 21-25 are respectfully traversed. The Office action proposes to modify the Zeng reference to couple photodetectors to at least one end of the stack of detector elements 106, allegedly as suggested by Miraldi.

The proposed modification, however, would not have been obvious to one of ordinary skill in the art. Miraldi discloses in Fig. 1 the use of a single detector 12, the components of which are shown in Fig. 2 and the physical configuration of which is shown in Fig. 7. As disclosed, the detector includes a rectangular scintillation crystal 86 mounted adjacent to a collimator 88, with photomultiplier tubes 96 and 98 mounted at each end of the scintillation crystal.

In contrast, Zeng discloses in Fig. 4 a slat collimator 100, which is interposed between an imaging object and a detector head 22. Specifically, the slat collimator is mounted on a radiation receiving face 23 of the detector head 22 as shown in Figs. 5A-5B (see also Fig. 8, showing scintillation elements 106 mounted on detector head 22). In particular, Zeng contemplates an embodiment wherein a single scintillator element spans across all of the collimator slats 102 (see col. 7, ll. 48-51).

From the teachings of Zeng, it is apparent that photodetector elements must be located within the detector head 22, and not left as a matter of choice as asserted in the Office action. Plainly, the disclosed embodiments wherein a single scintillator element spans across all of the collimator slats, or wherein plural scintillator elements each span multiple collimator slats, could not perform correctly with photodetectors mounted as shown by Miraldi for a single one-dimensional scintillation crystal. Additionally, even in the embodiment of Zeng where a scintillation element 106 is provided for each gap

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between collimator slats, as shown in Figs. 5A-5B and 8, photodetectors are required to be located in the detector head 22.

Given the stark differences between the one dimensional single collimated scintillation crystal detector of Miraldi and the planar detector heads 22 of Zeng, one of ordinary skill in the art would not have been motivated by the disclosure of Miraldi to have modified Zeng as proposed. The claims have been further amended to limit the photodetectors to solid-state detectors. Miraldi does not suggest solid state detectors but discloses only photomultiplier tube detectors. As such, even if combined as proposed, the resultant device would fail to meet the limitations of the claims.

Iwanczyk et al. fails to cure the basic deficiency in the proposed combination of references. While Iwanczyk shows the use of a silicon drift photodetector (SDP), such is also mounted as shown in Fig. 1 along the long dimension of a scintillator 37. Consequently, Iwanczyk also fails to disclose or suggest a gamma camera as set forth in the claims pending in the present application.

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Conclusion

In view of the foregoing, claims 1-5, 7-15, 18, 19 and 21-25 are submitted to define subject matter that is patentable over the prior art of record. Favorable reconsideration of this application and the issuance of a Notice of Allowance are requested.

Please charge any fee or credit any overpayment pursuant to 37 CFR 1.16 or 1.17 to Deposit Account No. 19-2179 in the name of Siemens Corporation.

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